

WHAT IS CLAIMED IS:

1. A motive-force transmission changeover mechanism in a disc apparatus comprising: a traverse unit; an optical pickup fixed on the traverse unit and adapted to run on parallel guide rails laid on a chassis of the traverse unit; a traverse holder holding the traverse unit via shock-absorbing members; a drive motor; and a disc-carrying tray to carry a disc for loading and unloading; an optical pickup drive mechanism having a traverse rack integrally connected to the optical pickup, and a gang of gear wheels to be detachably connected to the traverse rack for transmission of driving power of the drive motor; a traverse unit inclining mechanism having a lateral slider having an oblique cam slot and a rack, a forward projection of the traverse holder slidably fitted in the oblique cam slot, and a tray feeding pinion detachably mesh with the rack of the lateral slider; and a tray driving mechanism including a tray rack, an L-shaped cam slot both formed on rear surface of the disc-carrying tray, and a tray feeding gear wheel concentrically combined with the tray feeding pinion;

wherein a rotary control piece is pivotally fixed on the chassis of the traverse unit and being spring-biased to rotate in one direction; a retainer post stands upright on the chassis to prevent rotation of the rotary control piece; an intervening transmission switching gear wheel which makes the tray feeding gear wheel couple or decouple from the gang of gear wheels is rotatably fixed on the rotary control piece; a catch pin is fixed on the upper surface of the rotary control piece; and a cam rib is formed on lower surface of the traverse rack in confronting relation with the rotary control plate which is so configured as to make the rotary control piece release from the retainer post, and at the same time make the catch pin follow the rib contour, thereby allowing the transmission switching gear wheel to couple or decouple from the tray feeding gear wheel.

2. A motive-force transmission changeover mechanism according to claim 1, wherein the traverse rack has a chamfered end whereas the lateral slider has a guide piece its end so chamfered as to be complementary with the chamfered end of the traverse rack, whereby forward movement of the traverse rack laterally drives the lateral slider to allow the rack of the lateral slider to mesh with the tray feeding pinion.

3. A motive-force transmission changeover mechanism according to claim 1, wherein the cam rib is consisted of a trapezoid unlocking section for releasing the rotary control piece from the retainer post, and a subsequent curved rotation-controlling section for the catch pin to slide thereon.

4. A motive-force transmission changeover mechanism according to claim 3, wherein the trapezoid unlocking section and the curved rotation-controlling section of the cam rib are so sized, shaped and positioned that the transmission switching gear wheel is coupled with the tray feeding gear wheel before the lateral slider reaches the end of the lateral travel, and before the traverse rack is disconnected from a pinion in the gang of gear wheels.